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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/648,143

Applicant(s)

HARVEY ET AL.

Examiner

VERN CUMARASEGARAN

Art Unit

3629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 23 May 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-26 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 7-26 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-850)
Paper No(s)/Mail Date 6/3/08, 7/1/08, 7/15/08, 8/27/08
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 7-20 are rejected under 35 U.S.C. 101 because the claims are directed to non-statutory subject matter. Claims 14-20 recite the use of "logic" which as a computer program, is considered non-statutory subject matter. Claims 7-13 recite steps all of which are mental processes standing alone and untied to another category of statutory subject matter.

The Court stated in *In re Comiskey* (499 F.3d 1365) that "[a]lthough it has been suggested that *State Street Bank* supports the patentability of business methods generally, *State Street Bank* explicitly held that business methods are "subject to the same legal requirements for patentability as applied to any other process or method." *Id.* at 1375; see also MPEP §2106(I) (Rev. 4, Oct. 2005) ("MPEP") ("Claims should not be categorized as methods of doing business. Instead, such claims should be treated like any other process claims."). We must then consider the requirements of §101 in determining whether *Comiskey's* claims 1 and 32 for a method of mandatory arbitration for unilateral and contractual documents claim statutory subject matter." In its analysis, the Court in *Comiskey* held that:

Patentable subject matter under the 1952 Act is extremely broad. Given the breadth of the categories listed in §101, it is not surprising that the legislative history of

the 1952 Act noted that "Congress intended statutory subject matter to include anything under the sun that is made by man." Chakrabarty, 447 U.S. at 309 (quoting S. Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952); H.R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952) (internal quotation marks omitted)). On the other hand, the Supreme Court has made clear that this statement does "not ... suggest that §101 has no limits or that it embraces every discovery." *Id.*

Specifically, Supreme Court decisions after the 1952 Patent Act have rejected a "purely literal reading" of the process provision and emphasized that not every "process" is patentable. *Flook*, 437 U.S. at 589. Instead "[t]he question is whether the method described and claimed is a 'process' within the meaning of the Patent Act." *Gottschalk v. Benson*, 409 U.S. 63, 64 [175 USPQ 673] (1972); see also *Flook*, 437 U.S. at 593 ("[R]espondent incorrectly assumes that if a process application implements a principle in some specific fashion, it automatically falls within the patentable subject matter of §101."). "Abstract ideas" are one type of subject matter that the Supreme Court has consistently held fall beyond the broad reaches of patentable subject matter under §101. As early as *Le Roy v. Tatham*, 55 U.S. 156 (1852), the Supreme Court explained that "[a] principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right." *Id.* at 175. Since then, the unpatentable nature of abstract ideas has repeatedly been confirmed. See, e.g., *Diehr*, 450 U.S. at 185; *Chakrabarty*, 447 U.S. at 309; *Flook*, 437 U.S. at 589; *Benson*, 409 U.S. at 67; *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. 498, 507 (1874). The very cases of this court that recognized the patentability of some

business methods have reaffirmed that abstract ideas are not patentable. See AT&T, 172 F.3d at 1355; State Street Bank, 149 F.3d at 1373; see also *In re Alappat*, 33 F.3d 1526, 1542-43 [31 USPQ2d 1545] (Fed. Cir. 1994) (en banc).

The prohibition against the patenting of abstract ideas has two distinct (though related) aspects. First, when an abstract concept has no claimed practical application, it is not patentable. The Supreme Court has held that “[a]n idea of itself is not patentable.” *Rubber-Tip Pencil*, 87 U.S. at 507. In *Benson*, the claim was for a method of converting binary-coded decimal numerals into pure binary numerals that was “not limited to any particular art or technology, to any particular apparatus or machinery, or to any particular end use.” 409 U.S. at 64. Since the claim would therefore “wholly preempt the mathematical formula and in practical effect would be a patent on the algorithm itself,” the claim was unpatentable because its “practical effect” was to “patent an idea” in the abstract. *Id.* at 71-72. 11 See also AT&T, 172 F.3d at 1358 (holding that a mathematical algorithm must produce “a useful, concrete, and tangible result” to be patentable); *State Street Bank*, 149 F.3d at 1373 (same); MPEP §2106 (Rev. 5, Aug. 2006) (“[C]laims define nonstatutory processes if they ... simply manipulate abstract ideas ... without some claimed practical application.”). 11 In *Benson*, the Supreme Court reversed a decision by our predecessor court that had, in turn, relied on earlier decisions, such as *Application of Musgrave*, 431 F.2d 882, 893 [167 USPQ 280] (CCPA 1970), suggesting that a process of human thinking in and of itself could be patentable.

Second, the abstract concept may have a practical application. The Supreme Court has reviewed process patents reciting algorithms or abstract concepts in claims

directed to industrial processes. In that context, the Supreme Court has held that a claim reciting an algorithm or abstract idea can state statutory subject matter only if, as employed in the process, it is embodied in, operates on, transforms, or otherwise involves another class of statutory subject matter, i.e., a machine, manufacture, or composition of matter. 35 U.S.C. §101. As the PTO notes, "[t]he Supreme Court has recognized only two instances in which such a method may qualify as a section 101 process: when the process 'either [1] was tied to a particular apparatus or [2] operated to change materials to a 'different state or thing.'"" See PTO Supp. Br. 4 (quoting Flook, 437 U.S. at 588 n.9). In Diehr, the Supreme Court confirmed that a process claim reciting an algorithm could state statutory subject matter if it: (1) is tied to a machine or (2) creates or involves a composition of matter or manufacture. 12 450 U.S. at 184. There, in the context of a process claim for curing rubber that recited an algorithm, the Court concluded that "[t]ransformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines." Id. (quoting Benson, 409 U.S. at 70); 13 see also In re Schrader, 22 F.3d 290, 295 [30 USPQ2d 1455] (Fed. Cir. 1994) (holding when a claim does not invoke a machine, "§101 requires some kind of transformation or reduction of subject matter"). Thus, a claim that involves both a mental process and one of the other categories of statutory subject matter (i.e., a machine, manufacture, or composition) may be patentable under §101. See Diehr, 450 U.S. at 184 (holding a process that involved calculations using the "Arrhenius equation" patentable because the claim "involve[d] the transformation of an article, in this case raw, uncured synthetic rubber, into a different

state or thing"). For example, we have found processes involving mathematical algorithms used in computer technology patentable because they claimed practical applications and were tied to specific machines.

However, mental processes—or processes of human thinking—standing alone are not patentable even if they have practical application. The Supreme Court has stated that "[p]henomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work." *Benson*, 409 U.S. at 67 (emphasis added). In *Flook* the patentee argued that his claims did not seek to patent an abstract idea (an algorithm) because they were limited to a practical application of that idea—updating "alarm limits" for catalytic chemical conversion of hydrocarbons. 437 U.S. at 586, 589-90. The Court rejected the notion that mere recitation of a practical application of an abstract idea makes it patentable, concluding that "[a] competent draftsman could attach some form of post-solution activity to almost any mathematical formula." *Id.* at 590. Since all other features of the process were well-known, including "the use of computers for 'automatic monitoring-alarming,'" the Court construed the application as "simply provid[ing] a new and presumably better method for calculating alarm limit values." *Id.* at 594-95. The Court held the application unpatentable because "if a claim [as a whole] is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is nonstatutory." 437 U.S. at 595 (quoting *In re Richman*, 563 F.2d 1026, 1030 [195 USPQ 340] (CCPA 1977).

Following the lead of the Supreme Court, this court and our predecessor court have refused to find processes patentable when they merely claimed a mental process standing alone and untied to another category of statutory subject matter even when a practical application was claimed.

It is thus clear that the present statute does not allow patents to be issued on particular business systems—such as a particular type of arbitration—that depend entirely on the use of mental processes. In other words, the patent statute does not allow patents on particular systems that depend for their operation on human intelligence alone, a field of endeavor that both the framers and Congress intended to be beyond the reach of patentable subject matter. Thus, it is established that the application of human intelligence to the solution of practical problems is not in and of itself patentable.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 7, 14 and 21 recite the term “associated with” and it is unclear what would constitute an association. Because the terms of the association are not defined, the claims are rendered indefinite. Further clarification should be provided to define the boundaries of the scope of the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sticha (Patent No.6,554,183).

As to claims 1, 14 and 21,

providing a data repository storing a hierarchy of objects (abstract "database");
storing at least one first Business Service object under a first Business Entity (abstract, where the acquiring bank is *considered first Business Entity*) object associated with a first business entity, the first Business Service object identifying a business service that is provided by the first business entity (*examiner takes official notice that it is old and well known in the art to store information regarding services provided by an acquiring bank in a database. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the method of an acquiring bank using a database since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable*);
storing a Business Service Projection object under a second Business Entity

object associated with a second business entity, the Business Service Projection (*examiner interprets the term "Business Service Projections" to be a business service as described in the specification*) object identifying that the second business entity offers an interface to the business service provided by the first business entity (Fig. 4 *where a second Business Entity is considered to be an issuing bank. The service of the acquiring bank such as the payment of merchant for the transaction is projected under the issuing bank. Although the card is issued by the issuing bank, when the customer makes a purchase, the payment to the merchant is actually made by an acquiring bank, a different business entity*);

receiving a modification to the first Business Service object; and
automatically modifying the Business Service Projection object in response to receiving the modification to the first Business Service object (col.7 lines 17-21 *where in order for automated authorization to be made possible, a modification or changes to the objects would have been made in response to receiving such a modification. For example, credit balance would have been changed*).

As to claims 8, 15 and 22, Sticha et al show representing an alternative name (Fig.4 "Mastercard"), including representing the alternative name by a Directory technology alias feature (col.4 lines 23-33 *where pre-authorization information is stored in databases. Directory technology is interpreted to be a database*).

As to claims 9, 16 and 23, Sticha et al show alias feature being embodied in an alias object including a naming attribute with a value being an alternative name

(Mastercard) and including an alias object name with a value being a name of Directory object to which the alias points (col.4 lines 33-47 *where when a file is sent from vendor relations system over a communication link to the pre-authorization system database, it is inherent that a pointer to the database would be included in the file*).

As to claim 10, 17 and 24, examiner takes official notice that it is old and well known in the art to delete a data object in a database upon a request for deletion. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate a deletion feature since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

As to claims 11, 12, 18, 19 and 25, examiner takes official notice that it is old and well known in the art to have a search feature in a database. The search query and the search results are considered non-functional descriptive language and thus are not given patentable weight. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate a search feature since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

As to claim 13, 20 and 26, examiner takes official notice that it is old and well known that an issuing bank would not be able to make changes in an acquiring bank's database. Therefore, it would have been obvious to one of ordinary skill in the art to

incorporate a search feature since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Response to Arguments

Applicant's arguments filed May 23, 2008 have been fully considered but they are not persuasive. Applicant's assertion that Sticha does not show "providing data repository storing a hierarchy of objects" is not accurate. Sticha does show a database used by an issuing bank (abstract), and databases are known to be able to store a hierarchy of data objects. It is old and well known in the art for acquiring banks to store service information in their databases. Because Sticha anticipates or makes obvious in combination with old and well known knowledge all the elements of claim 7, the rejection is maintained.

Rejection of claims 1-6 under 35 U.S.C. 112 second paragraph has been withdrawn since claims have been cancelled by the applicant.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VERN CUMARASEGARAN whose telephone number is (571)270-3273. The examiner can normally be reached on Monday - Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 571-272-6812. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vc

/John G. Weiss/
Supervisory Patent Examiner, Art Unit 3629